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Torture and Mental Health

A Research Overview

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Over the last two decades, much work has been done on various forms of extreme trauma, particularly after the recognition in the early 1980s of posttraumatic stress disorder (PTSD) as a diagnostic entity. Since then, significant progress has been made in the diagnosis, assessment, and treatment of trauma survivors. Such progress, however, has not been paralleled by work specifically on the trauma of torture despite the widespread evidence of torture in the world and its mental health implications.

Traumatic events of human design such as rape, domestic or marital violence, child abuse, physical assault, combat and other forms of war violence, prisoner-of-war or concentration camp experience, kidnapping, hostage-taking, and terrorist acts, among others, share important common elements with torture. Despite the apparent differences between these traumatic events, their psychological consequences are remarkably similar, which suggests potential commonalities in the way these events are mediated in the central nervous system (Basoglu, 1992a). Furthermore, recent evidence from a controlled treatment study (Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998) suggests that psychological symptoms related to different types of traumatic events, whether accidents, natural disasters, or traumas

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of human design, respond similarly to particular forms of treatment (Livanou, 1998). Current knowledge on assessment, diagnosis, and treatment of trauma survivors could therefore be useful in working with survivors of torture. Similarly, the study of torture can contribute to our understanding of the mechanisms of traumatization, as there are striking parallels between experimental models of anxiety and depression and what human beings experience under torture (Basoglu & Mineka, 1992). A review of current knowledge on both torture and other extreme traumas could be beneficial for all these related fields.

PREVALENCE OF TORTURE

The term "torture" is often used in a moral or sentimental sense to designate any form of ill treatment with or without any purpose (Peters, 1985). Scientific study of this problem requires a more precise definition. The definition of torture used for the purposes of this chapter is that provided by the 1986 United Nations Declaration of Human Rights (United Nations, 1987). This definition is described elsewhere in the introduction to this book.

There are few studies of the prevalence of torture in the world on which to base reliable estimates. Epidemiological studies are difficult, if not impossible, because of the politically sensitive nature of the issue. The only data available are those published by human rights organizations such as Amnesty International. Although Amnesty International figures probably represent a fraction of all human rights abuses in the world, they nevertheless give some idea about the extent of the problem. The 1999 *Amnesty International Report* lists more than 121 countries known for some form of human rights violation in the previous year (Amnesty International, 1999).

An analysis (Basoglu, 1993) of the 1992 *Amnesty International Report* demonstrated the nature and global distribution of human rights violations. In 1991, systematic torture was reported in 93 of the 204 countries included in the *Amnesty International Report.* Reports of torture were more common from regions affected by political unrest, including mass demonstrations, riots, outbreaks of violence, killings, coup attempts, civil war, separatist or guerilla groups, armed tribal conflict, rebellions, and conflicts with various social and political opposition. The problem was not confined to these regions, however, as systematic torture or ill treatment was also reported in 25% of the western European and North American countries. The 1999 *Amnesty International Report* shows an increase in the number of countries involved in such atrocities.

Little is known about the prevalence of torture among various at-risk populations. Between 5% and 35% of the world's 14 million refugees (700,000 to 4.9 million refugees) are estimated to have had at least one experience of torture (Baker, 1992). These figures do not reflect the current extent of the problem after the recent developments in Eastern Europe, the former Yugoslavia, the Middle East, and other parts of the world torn by political turmoil, nationalistic movements, and regional wars. Similarly, some studies of nonpolitical prisoners suggest that the prevalence of torture in some prison populations may be as high as 85% (Paker, Paker, & Yuksel, 1992).

PHYSICAL EFFECTS OF TORTURE

Because they vary according to the form of torture used, classifying the physical sequelae of torture is difficult. The physical sequelae following the most commonly used forms of torture are reviewed in detail by Skylv (1992) and will be briefly discussed here. Various forms of torture often give rise to both structural injury in the body and disturbed function (Skylv, 1992). Torture survivors are often subjected to multiple forms of torture that result in overlapping injuries. The physical sequelae in tortured refugees characteristically concern the musculoskeletal system (Rasmussen, 1990). These injuries often arise from blunt blows to the body, repeated blows to certain parts of the body such as in falanga (beating of the soles of the feet); hanging by the wrists or the arms; being tied around the body, neck, or extremities; electrical torture; torture involving cuts, burns, or corrosion with acid; torture involving the teeth such as drilling, extraction, or violent blows; prolonged immobilization in forced positions; and sexual assault. An increased risk of infectious disease, malignancies, cerebrovascular accidents, and heart disease has also been reported in survivors of torture or prolonged arbitrary detention (Goldman & Goldston, 1985).

A review of the literature (Goldfeld, Mollica, Pesavento, & Faraone, 1988) found that among the physical sequelae of torture reported were the following:

- Hearing loss from "telephono" (beating on the ears with cupped hands)
- Distinctive scarring in the skin from electrical torture; burning with cigarettes, molten rubber, corrosive liquids, or tight ropes; or beating with blunt instruments
- Occult fractures, lumbosacral spine injuries, dislocation of vertebrae, or paraplegia as a result of beating or being hung by one extremity
- Aseptic necrosis of a toe, chronic venous incompetence of the legs, and pain on walking secondary to falanga
- Mutilation of genitalia, pregnancy, venereal disease, infertility, and miscarriage as a result of rape and torture of women
- Sexual dysfunction and testicular atrophy from genital torture in men

The authors noted that the studies of the physical effects of torture did not consistently present historical descriptive data or physical findings that could elucidate the etiology of the clinical symptoms and their connection to torture. Furthermore, the length of time between torture and evaluation was not consistently noted.

Because torture survivors are often subjected to multiple forms of torture giving rise to overlapping injuries, it may be difficult, particularly in the long term, to trace the symptoms and signs to particular forms of torture (Skylv, 1992). This makes it difficult to provide evidence for physical torture. However, some studies

(Lok, Tunca, Kumanlioglu, Kapkin, & Dirik, 1991) using bone scintigraphy have been able to detect increased activity in bones as a result of beating or falanga, even months after the torture.

PSYCHOLOGICAL EFFECTS OF TORTURE

In the last two decades numerous studies of the psychological effects of torture have been performed. Recent reviews (Basoglu, 1993; Goldfeld et al., 1988; Somnier, Vesti, Kastrup, & Genefke, 1992) have drawn attention to the methodological problems in these studies. These problems include insufficient description of the interview procedures, assessment instruments, diagnostic criteria, and medical diagnoses. Inadequate reporting of neurological and neuropsychological findings has made it difficult to rule out head trauma as a possible etiological factor. The length of time between the torture and assessment was often not reported. Few studies examined the relationship between the symptoms and the diagnosis of PTSD. Often it was not clear how factors such as gender, age, education, cultural traits, and personality factors related to posttorture symptoms.

A significant shortcoming of most of these studies is their uncontrolled design. Many focus only on refugees, and the additional effects of refugee trauma were not controlled for. Similarly, studies of nonrefugee survivors have not controlled for other nontorture, potentially traumatic life events. Torture is only one of the many traumatic stressors in an environment characterized by political repression (Basoglu, 1993; van Willigen, 1992), and such stressors are associated with increased psychiatric morbidity (Venzlaff, 1964).

A REVIEW OF STUDIES ON TORTURE

In this chapter, we will focus on the controlled studies after a brief review of the uncontrolled studies. The purpose of this review is to determine whether sufficient scientific evidence exists to show that torture has long-term psychological effects independent of other associated nontorture stressors, including refugee trauma.

Uncontrolled Studies

The psychological problems most commonly reported by torture survivors in uncontrolled studies (Allodi & Cowgill, 1982; Berger, 1980; Cathcart, Berger, & Knazan, 1979; Domovitch, Berger, Waver, Etlin, & Marshall, 1984; Lunde, 1982; Rasmussen & Lunde, 1980; Wallach & Rasmussen, 1983; Warmenhoven, van Slooten, Lachinsky, de Hoog, & Smeulers, 1981) were reviewed by Goldfeld et al. (1988) and included (a) psychological symptoms (anxiety, depression, irritability or aggressiveness, emotional lability, self-isolation or social withdrawal), (b) cognitive symptoms (confusion or disorientation, impaired memory and concentration, impaired reading ability), and (c) neurovegetative symptoms (lack of energy, insomnia, nightmares, sexual dysfunction). These findings were supported by the results of later studies (Abildgaard et al., 1984; Bauer, Priebe, Haring, & Adamczak, 1993; Cunningham & Cunningham, 1997; Hougen, Kelstrup, Petersen, & Rasmussen, 1988; Kjaersgaard & Genefke, 1977; Lunde, Rasmussen, Lindholm, & Wagner, 1980; Petersen et al., 1985; Petersen & Jacobsen, 1985; Rasmussen, Dam, & Nielsen, 1977; Somnier & Genefke, 1986). Other findings reported in studies of torture survivors include abnormal sleep patterns (Astrom, Lunde, Ortmann, & Boysen, 1989), somatization (Mollica, Wyshak, & Lavelle, 1987), and personality changes (Ortmann & Lunde, 1988; Somnier & Genefke, 1986).

Traumatic brain injury is one factor that appears to be associated with psychiatric comorbidity in survivors of mass violence and torture. Some studies of Holocaust survivors (Astrom, 1968; Eitenger, 1961; Hermann & Thygesen, 1954; Thygesen, Hermann, & Willanger, 1970) have reported neuropsychiatric symptoms (described as the "KZ" or "concentration camp" syndrome) that were thought to be related to traumatic brain injury. Brain injury is also suggested as a significant risk factor in survivors of torture (Goldfeld et al., 1988). Some studies reported an association between neuropsychiatric symptoms and head trauma (Petersen & Jacobsen, 1985; Rasmussen, 1990). There have also been case reports of neuropsychiatric findings in torture survivors including neurological symptoms and cerebral atrophy (Jensen et al., 1982; Somnier et al., 1982). Another study using computerized tomography of the brain (Somnier, Jensen, Pedersen, Bruhn, Salinas, & Genefke, unpublished data, cited in Somnier et al., 1992), however, found no evidence of cerebral atrophy. Furthermore, no evidence of progressive cognitive impairment was found in other studies of torture survivors (Somnier & Genefke, 1986). A more recent study of 55 torture survivors (Basoglu, Paker, Paker, Ozmen, Marks, et al., 1994), which investigated the relationship between various torture events and long-term psychological status, found no correlations between reports of head trauma (e.g., beating or blows on the head) and psychological symptoms. The evidence on this issue is thus conflicting, and further studies using modern methods of neuropsychiatric and neuropsychological investigation are required to clarify the role of head trauma in developing posttorture symptoms.

In a more recent review of the literature (Somnier et al., 1992), the most commonly reported symptoms in torture survivors were anxiety; cognitive, memory, and attention problems; mood disturbance; sleeping difficulty; sexual dysfunctions; personality changes; lack of energy; and behavioral disturbances. These problems were also common in nonrefugee survivors of torture (Abildgaard et al., 1984; Foster, 1987; Jadresic, 1990; Kordon et al., 1988; Lunde et al., 1980; Lunde & Ortmann, 1990; Pagaduan-Lopez, 1987; Wallach & Rasmussen, 1983).

Other studies involved mixed samples of tortured and nontortured refugees. In a study of 993 displaced Cambodians living in a Thai border camp (Mollica et al., 1993), the prevalence of depression was as high as 82%, and 15% of the study participants had symptoms that were consistent with western criteria for PTSD. In a study of asylum-seekers in Australia (Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997), the rate of PTSD was 36.8% (47% among those who were exposed to various traumatic events, including torture). High rates of PTSD and depression were also reported in other studies of Cambodian refugees (Kinzie & Boehnlein, 1989; Kinzie, Sack, Angell, & Manson, 1986; see also chapter 7 in this volume).

Controlled Studies

A Danish study (Hougen et al., 1988) of 14 tortured refugees and 14 control participants who were neither imprisoned nor tortured found more psychological problems in torture survivors compared with the control subjects. However, there were design problems in the study. The number of participants was very small, and the matching of controls was not adequate. Also, possible effects of nontorture stressors were not controlled for in comparing the two groups, and the symptoms were not assessed in sufficient detail. In addition, refugee status was found to be related to better psychological health, and the control group included refugees.

Another study of 105 Latin American refugees in Denmark (Thorvaldsen, 1986, as cited in Somnier et al., 1992) found more symptoms of headaches, fatigue, sleep disturbance, nightmares, and concentration difficulty among 44 tortured refugees than among those in the control group. The between-group differences were significant, despite the fact that some of the controls had been imprisoned and ill-treated—but not tortured—in their countries.

In a prospective controlled study of Spanish torture survivors (Petersen & Jacobsen, 1985), torture survivors had more symptoms of depression, anxiety, emotional lability, sleep disturbance, nightmares, and memory and concentration difficulties than did the nontortured controls. This study, however, did not use established diagnostic criteria and standardized measures of anxiety, depression, and posttraumatic stress symptoms. The small sample size (n=10) and inadequate controls in matching participants further weakened the study's findings.

Another study involved 246 inmates of a prison in Turkey (Paker et al., 1992), 208 of whom were tortured for nonpolitical reasons. The sample had some homogeneity with respect to nontorture stressors. Tortured and nontortured inmates were not matched, but multiple regression analyses were used to control for some of the confounding variables. The revised third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R; American Psychiatric Association, 1987) criteria for PTSD were used in assessing psychological status. Torture survivors had significantly more PTSD and higher scores on measures of general psychopathology than did the nontortured prisoners. The length of time since the last torture experience, however, was not taken into account. Furthermore, the specific effects of torture were confounded by other stressors during imprisonment and elsewhere.

A more recent study in Turkey (Basoglu, Paker, Paker, Ozman, Marks, et al., 1994) used semistructured interviews based on DSM-III-R and other standardized assessor- and self-rated instruments to compare 55 tortured political activists with 55 nontortured political activists and 55 nontortured individuals who had no history of political activity or involvement. All groups were matched for age, sex, and marital and sociocultural status. The first two groups were also matched for political ideology and extent of political involvement.

The study involved nonrefugee survivors of torture, thereby avoiding the confound of refugee status. The DSM-III-R Severity of Psychosocial Stressors Scale for adults was used to measure nontorture stressful life events before, during, and after detention or imprisonment. The groups were similar in all matching variables, as well as in other variables such as ethnic status, past psychiatric history, family history of psychiatric illness, history of alcohol and drug abuse, and lifetime exposure to nontorture stressful life events. Severity of torture was quantified by using an Exposure to Torture Scale, which yielded two objective (the number of forms of torture that individuals were exposed to and the total number of exposures to all forms of torture) and two subjective (the sum of perceived distress ratings with respect to each torture event reported and a global rating of overall stressfulness of torture) measures of torture severity. The study design and measures thus allowed both between- and within-group analyses to examine the effects of torture while controlling for other confounding variables such as nontorture stressors.

The torture survivors had significantly more lifetime and current PTSD than did the controls (33% vs. 11% and 18% vs. 4%, respectively). Compared with controls, torture survivors also had higher anxiety and depression, although these scores in both groups were within the normal range. Among the factors related to long-term psychological status were the secondary effect of captivity and torture on family, family history of psychiatric illness, and postcaptivity psychosocial stressors (Basoglu, Paker, Paker, Ozmen, and Sahin, 1994). However, age at trauma, gender, and marital and socioeconomic status did not predict posttorture psychological functioning.

Among the diagnostic categories assessed by using the Structured Clinical Interview for DSM-III-R (SCID), the most common psychiatric condition was PTSD. Overall, no evidence of a syndrome different from PTSD was found (Basoglu, 1992b). The most common symptoms were (in descending order of frequency) as follows:

- Memory and concentration impairment
- Nightmares
- Distress in response to reminders of trauma
- Recollections of trauma
- Startle reactions
- Psychogenic amnesia
- Reexperiencing of the trauma
- Sleep disturbance
- Irritability
- Avoidance of reminders of trauma
- Physiological arousal
- Restricted expectations for the future
- Detachment from others
- Hypervigilance
- Restricted affect
- Diminished interest in activities
- Avoidance of trauma thoughts

A principal-components analysis of all anxiety and depression measures and PTSD symptom ratings yielded seven components: (a) depression and anxiety, (b) social withdrawal and estrangement, (c) autonomic reactivity and avoidance of trauma stimuli, (d) problems of impulse control, (e) reexperiencing phenomena, (f) emotional numbing and amnesia, and (g) nightmares or memory and concentration impairment (bipolar). PTSD and depression, which are often overlapping features in trauma survivors, were independent in this study group, a finding that supported the validity of PTSD as a diagnostic entity in the study group.

Although the study clearly demonstrated the effects of torture, considering the severity of torture endured by the survivors (a mean of 291 exposures to a mean of 23 different forms of torture), the prevalence of PTSD and major depressive illness was lower than expected. In an attempt to explain this finding, the investigators pointed to the possible protective role of a strong belief system, commitment to a cause, prior knowledge and expectations of torture, and possible prior immunization to traumatic stress (Basoglu, Paker, Paker, Ozmen, & Sahin, 1994). The majority of the survivors were highly committed political activists who reported prior expectations of and psychological preparedness for torture. Many survivors also reported having used elaborate coping strategies during torture, a factor that has been hypothesized to play a role in the development of traumatic stress symptoms (Basoglu & Mineka, 1992).

Of all the measures of torture severity, only perceived distress during torture related to PTSD (Basoglu & Paker, 1995). Frequency of torture did not predict posttraumatic stress responses, suggesting that for some individuals, once torture reaches a certain individual "threshold," repeated torture does not have an additional effect. A differential relationship was found between stressors and symptoms: Perceived severity of torture predicted PTSD, but not depression, whereas postcaptivity lack of social support related to depression, but not to PTSD. Postcaptivity nontorture stressors, however, related to both PTSD and anxiety and depression. These findings suggest that both torture and posttorture psychosocial stressors are associated with traumatic stress symptoms in torture survivors.

The study also examined some of the cognitive factors that may have protected the survivors against the traumatic effects of torture (Basoglu et al., 1996). The three groups were compared in their appraisal of self, others, and state authority. There were no remarkable differences between tortured and nontortured political activists, and both groups differed from nonactivist controls in having a more negative appraisal of state authority. The study concluded that a pretrauma lack of belief in a "benevolent state" may be important in predicting posttorture reactions.

The earlier study by Basoglu, Paker, Paker, Ozmen, Marks, et al. (1994), while pointing to the possible protective role of "psychological preparedness for trauma," could not test this hypothesis because of insufficient variability in the sample; most of the study participants were highly committed political activists. A later study (Basoglu et al., 1997) was carried out to compare the previous sample of 55 tortured political activists with 34 torture survivors who had no history of political activity, commitment to a political cause, or expectations of arrest and torture and thus were presumed to be less "psychologically prepared." Compared with the political activists, the nonactivists were subjected to relatively less severe torture but had significantly more current PTSD (58% vs. 18%) and current major depression (24% vs. 4%) and higher levels of psychopathology on most clinical measures. Of all the predictor variables examined, less psychological preparation for trauma was the strongest predictor of greater perceived distress during torture and more severe psychological problems. These findings support the role of a possible "immunization" effect created by psychological preparation that may reduce the effects of traumatic stress. The study also showed that unpredictability and uncontrollability of stressors appeared to exacerbate the effect of torture. Higher education was also a significant predictor of better psychological health.

In a 1997 study of 61 torture survivors in Turkey (Basoglu, Aker, Kaptanoglu, Livanou, & Erol, n.d.), which included both political activists and nonactivists, the lifetime prevalence of PTSD was substantially higher (63%) than that found in the 1994 study. The authors observed that the higher rate may have been caused by the inclusion of nonactivists in the sample. To examine the cognitive and behavioral components of psychological preparedness for trauma, this study attempted to operationalize some of the cognitive constructs (e.g., beliefs about a just world, personal safety, and trust in others) that are thought to play a role in posttraumatic stress responses (Foa, Zinbarg, & Rothbaum, 1992; Janoff-Bulman, 1992) and examine their relationship with PTSD in survivors of torture. Preliminary results from this study suggested that loss of faith and trust in others was a mediating variable in traumatization. Survivors who had stronger feelings of injustice arising from the impunity enjoyed by the perpetrators of human rights violations had more severe psychological problems. On closer examination, both loss of control and fear of further persecution were critical to the survivor's reaction to the impunity of perpetrators.

Another recent study (Maercker & Schutzwohl, 1997) investigated the long-term effects of political imprisonment in the former German Democratic Republic and compared 146 former political prisoners with 75 controls matched for age and sex. Psychological status was assessed using a semistructured diagnostic interview based on DSM-III-R. In comparison with controls, the former political prisoners had significantly higher rates of lifetime (59.6%) and current (30.1%) PTSD, claustrophobia, social phobia, and substance abuse, as well as higher scores on measures of anxiety, depression, general psychopathology, and dissociative symptoms. The prevalence of PTSD in this sample was thus higher than that found in the Basoglu, Paker, Paker, Ozmen, Marks, et al. (1994) study. Maercker and Schutzwohl (1997) also suggested that this difference might be explained by the fact that their sample included both political activists and nonactivists, whereas the sample in the Basoglu, Paker, Paker, Ozmen, Marks, et al. (1994) study consisted mainly of political activists. Analysis of data from this later study showed a similar high rate of lifetime PTSD (63%) when the activist and nonactivist groups were combined.

A recent controlled study (Shrestha et al., 1998) of 526 Bhutanese refugee survivors of torture in Nepal matched on age and sex with 526 nontortured refugees is the largest study of tortured refugees that has used matched controls to date. Participants in the study group were randomly selected from among the Bhutanese refugee community in the United Nations refugee camps in the Terai in eastern Nepal. The DSM-III-R criteria for PTSD and the Hopkins Symptom Checklist were used as the main outcome measures. Compared with the control group, the torture survivors had more PTSD symptoms, higher anxiety and depression scores, and more musculoskeletal and respiratory system complaints. The authors concluded that torture may increase the risk for mental health problems among refugees displaced within the developing world and that PTSD symptoms appear to be part of a universal reaction to torture. They also pointed to the need for an increase in services for tortured refugees.

A study in the United States of 62 Vietnamese expolitical detainees and 22 controls (Mollica et al., 1998) included participants who had registered for social services with the Vietnamese Civic Association on arriving in the Boston area from abroad. The control group of 22 males from the Vietnamese community had spent less than 1 year in a Vietnamese prison or reeducation camp and were not from the expolitical detainee resettlement program. Although the study did not use matched controls, between-group differences in psychological status were examined by using regression analyses that controlled for differences in sample characteristics. Compared with the controls, the expolitical detainees showed significantly higher scores on depression and PTSD symptoms, but the difference in the prevalence rates of PTSD (77.3% vs. 88.2%, respectively) and major depression (36.4% vs. 56.9%, respectively) between the two groups did not reach statistical significance. A series of linear regression analyses using various sample characteristics and a measure of cumulative trauma severity (number of torture events reported) showed that severity of torture was the most significant predictor of depression and PTSD symptoms (particularly of arousal symptoms). The authors suggested that a small sample size may have accounted for the lack of statistically significant differences in the prevalence of psychiatric diagnoses. The fact that some of the control subjects had prior incarceration (mean 0.1 year) and torture experiences (mean 3.1 torture events) may also have minimized the between-group differences in posttrauma psychological status.

A controlled study (Holtz, 1998) that was carried out in India involved 35 tortured refugee Tibetan nuns and lay students and 35 nontortured refugee nuns and students matched for sex, age, lay status, and years in exile. In addition to ratings of anxiety and depression, the study used measures of preexile, flight, and postexile stressors; pretrauma and posttrauma political commitment; prior knowledge of and preparedness for torture; and social support in exile. Unfortunately, PTSD was not assessed because of a lack of agreement among the researchers on a culturally valid translation of PTSD criteria. Relative to the controls, the torture survivors had significantly higher scores on measures of anxiety, but the two groups did not differ on ratings of depression. However, a lack of prior knowledge of and psychological preparedness for torture was found to be a significant predictor of posttorture anxiety symptoms. Other predictors included male sex, longer duration of torture, exposure to solitary confinement, feelings of hopelessness in prison, and recent arrival in India. The author suggested that the survivors' Tibetan Buddhist training as nuns may have contributed to their preparedness for or resilience to the traumatic effect of torture.

EVIDENCE FOR A TORTURE-SPECIFIC SYNDROME

The claims for evidence for a "torture syndrome" were based on two earlier studies (Abildgaard et al., 1984; Allodi & Cowgill, 1982). A study of 22 Greek torture survivors (Abildgaard et al., 1984) distinguished four groups of symptoms that appeared to constitute a chronic organic psychosyndrome (COP): (a) impaired memory and concentration; (b) sleep disturbance and nightmares; (c) psycholability, anxiety, and depression; and (d) vegetative symptoms, including gastrointestinal symptoms, cardiopulmonary symptoms, and sudden attacks of sweating without demonstrable organic cause. Eight survivors who had three or more of these symptoms were diagnosed as having COP. This study had several weaknesses: (a) a retrospective and uncontrolled design, (b) a fairly small sample size, (c) a failure to rule out the possible effects of head trauma, and (d) a failure to validate the three-symptom criterion. The syndrome was not related to age, sex, neurological signs, frequency of head trauma, or history of loss of consciousness during torture or following head trauma. On the other hand, it was related to longer duration of torture, suggesting that COP might have reflected greater severity of illness caused by more severe trauma. Also, the symptoms did not appear to be different from PTSD.

The other study (Allodi & Cowgill, 1982) involved 41 survivors who had been tortured a few months to 6 years before the assessment. The symptoms reported in this study were no different from those of other studies reviewed earlier. The study was also uncontrolled and involved only asylum-seekers. In addition, it was not clear how the symptoms related to PTSD criteria.

None of the other studies reviewed here examined whether the symptoms of torture survivors cluster in a coherent fashion so as to constitute a syndrome. Indeed, these studies appear to have merely listed the symptoms observed in torture survivors (Turner & Gorst-Unsworth, 1993). Evidence for a torture-specific syndrome would require (a) evidence of a causal connection between the torture and subsequent symptoms; (b) a meaningful grouping of symptoms, validated across samples and cultures; and (c) a comparison of symptoms with established diagnoses such as PTSD (Basoglu, 1997). Recent studies (Basoglu, Paker, Paker, Ozmen, Marks, et al., 1994; Maercker & Schutzwohl, 1997; Mollica et al., 1998; Shrestha et al., 1998) that addressed some of these requirements have not provided evidence for a torture syndrome different from PTSD.

SOCIAL AND ECONOMIC CONSEQUENCES OF TORTURE

Relatively little is known about the social and economic consequences of torture. After release, torture survivors may stay in their own country, escape to a nearby refugee camp, or travel to interim resettlement countries before final resettlement. Some do all of these in succession, although most survivors stay in their native countries where they were tortured (Somnier et al., 1992). The social and economic costs of torture are, therefore, important issues for the countries where torture systematically occurs, as well as for host countries that provide asylum to large numbers of tortured refugees.

Several factors may account for the social and economic consequences of torture and associated life events. Loss of social or occupational status or educational opportunities as a result of prolonged imprisonment, as well as problems in finding employment after release, may contribute to social and economic difficulties. These problems may also be compounded by the physical and psychological effects of torture. Physical disability may arise from permanent bodily injury (Skylv, 1992) or head trauma leading to cognitive impairment. Psychological problems, including PTSD and depression, may cause significant social disability and undermine the chances of finding employment. Irritability and rage reactions may impair interpersonal relationships. Marital and family problems may occur because of the inability to feel intimacy or to reestablish trust. Memory and concentration difficulties may reduce the capacity for learning and impair work performance. Symptoms of impulsivity and irritability may lead to problems with the law.

Several lines of evidence suggest that a particular symptom of PTSD, that is, avoidance of trauma reminders, warrants special attention in understanding the causes of social and economic disability in torture survivors. Although the avoided situations or activities can be infinitely varied depending on the extent of stimulus generalization, they often included crowded places; police or army officers; social or political meetings; street demonstrations; police or army cars on the street; authority figures; people who share certain physical characteristics (e.g., facial features, moustache) with the torturers; television (e.g., news of violence); newspapers; public transportation; hospitals; medical examinations or investigations; close spaces; close physical contact with others; and activities such as walking on the street, being alone at home, sleeping in the dark, and sleeping alone (Basoglu & Aker, 1996; Basoglu, Paker, Paker, Ozmen, Marks, et al., 1994). General anxiety disorders research has shown that behavioral avoidance of feared situations is the primary cause of disability in work, social, and family functioning (Basoglu, Lax, Kasvikis, & Marks, 1988; Basoglu, Marks, Swinson, et al., 1994). Similarly, global clinical improvement is most closely associated with improvement in behavioral avoidance of feared situations (Basoglu, Marks, Kilic, Noshirvani, & O'Sullivan, 1994). In a recent study of a mixed group of trauma survivors (Marks et al., 1998), avoidance of trauma reminders was one of the most significant predictors of social disability and severity of illness (Livanou, 1998). No comparable studies are yet available with torture survivors, but some preliminary evidence suggests that this symptom is also an important determinant of social disability in torture survivors. In one of the studies reviewed above (Basoglu, Paker, Paker, Ozmen, Marks, et al., 1994), 33% of tortured political activists had significant avoidance of trauma reminders, despite their observed resilience to torture. The avoidance symptom occurred more often (53%) among nonactivist survivors of torture (Basoglu et al., 1997). Furthermore, some case studies (Basoglu & Aker, 1996; Basoglu, 1998) suggest that interventions aimed at reducing avoidance behavior lead to a significant improvement in social disability. Further investigation of this symptom, therefore, is warranted in future studies of the social and economic consequences of torture.

Other commonly observed psychological problems in torture survivors need to be taken into account in estimating economic costs of torture, especially the tendency to develop somatic symptoms and preoccupation with bodily complaints (Basoglu, 1992b; Mollica et al., 1987; Somnier et al., 1992). Somatization is said to be more common in certain nonwestern cultures (Kleinman & Good, 1985), and it is unclear whether torture has a unique effect on this tendency. Torture survivors with somatic symptoms often seek costly medical examinations and treatments that may not be necessary. Currently, there are no estimates of the degree of medical services sought by torture survivors, whether in their country of origin or in a host country. An investigation of this issue appears worthwhile.

There have been relatively few systematic studies of the effects of torture on the survivor's family. This issue deserves special attention in light of the findings from a recent study (Basoglu, Paker, Paker, Ozmen, & Sahin, 1994) that showed that the presence of additional family stressors was a more significant predictor of PTSD than the actual trauma of torture itself. These stressors included events such as persecution or torture of family members as a result of the survivor's political involvement, loss of contact with the family because of long-term captivity or geographic distance, and breakdown in marital relationships as a result of prolonged imprisonment or later psychological problems.

A number of other factors associated with the torture survivor's experience have been shown to affect family functioning. Psychological problems may arise in the children of torture survivors as a result of witnessing the torture of parents, parental absence, or posttraumatic behavioral problems in parents. Common problems in survivors' children include anxiety, hypersensitivity to noise, insomnia, and nightmares (Cohn, Holzer, Koch, & Severin, 1980); withdrawal, depression, irritability, aggressiveness, generalized fear, excessive clinging, and dependence on parents (Acuna, 1989); and psychosomatic problems and deterioration in school performance (Weile, Wingender, Bach-Mortensen, & Busch, 1990). In addition, posttorture behavioral problems of the torture survivor, such as introversion, withdrawal, isolation, excessive stubbornness, and authoritarian attitudes aimed at regaining status and control in the family (Comite de Defensa de los Derechos del Pueblo, 1989), may cause further maladjustment in the family. Furthermore, the survivor's family may come under further strain by additional stressors, such as unemployment, poverty, and various social stigmas (e.g., being labeled terrorists) when the torture experience is linked to involvement in dissident political activity (Daly, 1980).

Flight into exile, asylum-seeking, and settlement in a new country are additional events that aggravate the social and economic consequences of political persecution and torture. Separation from family, loss of social and occupational status, deprivation of social support networks and physical needs, uncertainty about the future, problems settling in a new country and adapting to a new culture, and housing and economic problems are among the many issues faced by refugee survivors of torture (van Willigen, 1992; Witterholt & Jaranson, 1998). In addition, racism and antiimmigrant bias may be part of the survivor's resettlement experience in much of the western world (Baker, 1992), even for those who have already been granted permanent residency in a host country. Those who have escaped to a host country without proper documents may face the risk of being summarily deported back to their home country or placed in detention. A more detailed review of the social and economic consequences of refugee trauma can be found in chapter 7 in this volume.

DISCUSSION AND CONCLUSIONS

Evidence on the Psychological Effects of Torture

In this chapter we have attempted a rather stringent review of the evidence on the independent psychological effects of torture because trauma research in general is often plagued by confounding factors. These factors, such as length of time since the trauma, other stressful life events, previous psychiatric history, individual variables, and concomitant depression, make demonstrating a stressor–response relationship difficult. Reliable conclusions require controlled comparisons between torture survivors and nontortured individuals with careful matching on relevant variables and statistical techniques to control for the effects of confounding variables. The reliability of conclusions is not merely a scientific concern; valid and reliable information is a critical element of effective human rights activity against torture.

The findings from both uncontrolled and controlled studies indicate there is substantial evidence that in some individuals torture has psychological effects independent of other associated stressors. Recent studies (Basoglu, Paker, Paker, Ozmen, Marks, et al., 1994; Maercker & Schutzwohl, 1997; Mollica et al., 1998; Shrestha et al., 1998) using standardized measures and controls supported the results of earlier investigations. In the study by Basoglu, Paker, Paker, Ozmen, Marks, et al. (1994), the effects of torture could be demonstrated despite a potential referral bias (i.e., highly resilient and less severely traumatized political activists coming forward to take part in the study). Indeed, more representative samples of torture survivors might show higher levels of traumatization, as suggested by findings of higher rates of PTSD in subsequent studies also involving nonactivist torture survivors (Basoglu et al., 1997, n.d.).

Given the possible confounding factors, can the findings in the Basoglu et al. (1997) study be attributed to torture per se? Confounding variables such as previous psychiatric history, concomitant anxiety, depression, drug or alcohol abuse, and nontorture stressors were either balanced across groups or very uncommon among the torture survivors. Major depression, for example, which often overlaps with PTSD and confounds the clinical picture, was quite rare in the study group.

Furthermore, personality factors that often obscure the stressor–response relationship were somewhat different in this study because the study involved political activists, who seem to share some common experiences or personal characteristics that may be protective in torture situations. The PTSD symptoms observed in such individuals, therefore, may be more likely to reflect the specific effects of torture. Finally, certain PTSD symptoms such as nightmares, intrusive thoughts, reexperiencing phenomena, and avoidance of trauma-related cues were clearly related to the torture experience.

Torture in the Context of Refugee Trauma: Implications of Current Knowledge for Refugee Care

The relative importance of torture and trauma within the full context of the refugee experience is a focus of ongoing debate among mental health professionals working with refugees. Some workers emphasize the trauma of torture, whereas others regard torture as one of the many traumatic events experienced by refugees (van Willigen, 1992). Although there are no direct comparisons of refugee and nonrefugee torture survivors yet, there is some indirect information that may shed light on this issue.

The rates of psychological problems reported in studies of refugee survivors of torture (Somnier et al., 1992) appear to be higher than those found in studies of nonrefugee torture survivors. This effect may be a result of further traumatization by additional stressors involved in the refugee experience. This observation is supported by at least two lines of evidence concerning the mechanisms of traumatization in torture survivors. First, in the Basoglu, Paker, Paker, Ozmen, and Sahin (1994) study, posttorture psychosocial stressors contributed independently to traumatic stress reactions, which supports the notion of "sequential" traumatization. Second, postcaptivity lack of social support predicted depression. These findings suggest that additional stressors such as refugee trauma, which involve deprivation of social support networks, may contribute to traumatic stress responses.

There may, however, be different psychological problems associated with torture and other forms of refugee trauma. This theory is supported by the fact that perceived severity of torture appears to be related to PTSD, but not to depression. However, lack of posttorture psychosocial support was associated with depression, but not with PTSD. The connection between torture and "core" PTSD symptoms such as reexperiencing phenomena, heightened physiological arousal, and avoidance of reminders of trauma may reflect the conditioning effects of torture. Conversely, lack of social support may lead to depression by reducing the sense of control over subsequent stressors and precipitating helplessness and hopelessness (Basoglu & Mineka, 1992). This observation is supported by findings from another study (Mollica et al., 1998) involving Vietnamese refugees in the United States that showed that the severity of torture related to both PTSD and depression, whereas length of residence in a host country (United States) was associated only with depression.

These findings suggest that both torture and trauma associated with the refugee experience are important issues in refugee care. However, further research is required to clarify the unique role that each may play, as well as their interaction. Comparisons between studies may not be entirely valid given the methodological and sampling differences between studies of refugee and nonrefugee survivors of torture. For example, the Basoglu et al. (n.d.) study found that the prevalence of lifetime PTSD was higher (63%) for nonrefugee survivors of torture involving political activists and nonactivists compared with a previous study involving mainly political activists (33%) (Basoglu, Paker, Paker, Ozmen, & Sahin, 1994). Additionally, "psychological preparedness for trauma" (as appropriately defined and operationalized for particular samples) appears to be one of several important factors to be addressed in any comparison between different samples of torture survivors.

The finding that torture and subsequent psychosocial stressors such as refugee trauma may have differential psychological effects has important implications for treatment. For example, rehabilitation programs with a focus on providing social support for refugees may be helpful in preventing or alleviating depression but may not be effective in reducing disabling PTSD symptoms. Indeed, more than 80% of the nonrefugee torture survivors studied by Basoglu, Paker, Paker, Ozmen, & Sahin (1994) had strong social and psychological support from their community; nevertheless, many of them had chronic PTSD symptoms. Rehabilitation programs may therefore need to be complemented with specific psychological interventions that are known to be effective in reducing PTSD symptoms, especially because the nature and extent of PTSD symptoms may make it difficult for the survivor to access and use social support (Keane, Albano, & Blake, 1992).

Factors Related to Long-Term Psychological Status in Torture Survivors

Relatively little is known about the factors that determine psychological response to torture, and few attempts have been made to investigate this issue in a systematic fashion in studies of nonrefugee survivors of torture. Furthermore, prediction studies require the use of special statistical techniques (e.g., multiple regression analysis) to examine the unique or independent effects of predictor variables, and few studies have employed such methods of analysis. Recent controlled studies of nonrefugee survivors of torture (Basoglu et al., 1997; Basoglu & Paker, 1995; Basoglu, Paker, Paker, Ozmen, & Sahin, 1994) identified subjective severity of torture, posttorture psychosocial stressors, family history of psychiatric illness, postcaptivity social support, "psychological preparedness for trauma," and education as predictors of long-term psychological status. Current age, gender, age at trauma, socioeconomic status, marital status, and frequency of torture were not significant predictors of long-term psychological functioning. These findings, however, need to be replicated in other groups of torture survivors in different cultures and in refugee torture survivors.

Among all the predictor variables examined in the above studies, "psychological preparedness for trauma" as a protective factor appears to be the most significant predictor of posttrauma psychological status. This finding has been replicated by a recent study by Holtz (1998). Holtz's findings point to the importance of the study of resilience and other protective factors in torture survivors as well as in survivors of other types of trauma. The mechanisms by which "psychological preparedness for trauma" serves as a protective factor against traumatic stress are yet unclear. In the Basoglu et al. (1997) study, this measure was used to assess pretrauma political activity, commitment to a political cause, and expectation of arrest and torture. Thus, the critical ingredients in psychological preparedness may be (a) cognitive processes, such as a strong belief system (political, religious, or other), the ability to give a meaning to the traumatic experience, or predictability or controllability of traumatic stressors; (b) behavioral processes, such as prior immunization to traumatic stressors during political activity; or (c) a combination of both cognitive and behavioral processes. Future research needs to operationalize these processes and examine their relative contributions to protective factors and resilience against traumatic stress.

It is critical to note that the concept of "psychological preparedness" for trauma as a protective factor against traumatic stress should not be seen as implying a weakness, failure, or personality deficit in torture survivors who develop psychological problems as a result of torture. "Psychological preparedness," as defined in the Basoglu, Paker, Paker, Ozmen, Marks, et al. (1994) study, is a new concept defined as a measure of resilience relating to a specific stressor situation (i.e., torture), and not as a measure of a general personality trait (Basoglu et al., 1997). Nor does it imply complete immunity against the traumatic effects of torture; many highly trained or "prepared" individual torture survivors develop core PTSD symptoms, such as reexperiencing and avoiding trauma reminders (Basoglu, Paker, Paker, Ozmen, Marks, et al., 1994). Furthermore, trauma researchers agree that personality factors play a greater role in PTSD at relatively lower levels of trauma intensity, and their effect is minimized as stressor intensity increases beyond a certain threshold.

Some recent evidence (Basoglu et al., 1997, n.d.; Holtz, 1998) suggests that certain situational variables, such as loss of control during torture, are related to greater perceived distress and subsequent posttraumatic stress responses. Individuals with less psychological preparedness for torture are less likely to have developed coping strategies to use during the torture experience (e.g., in using strategies to avoid severe torture or lessen the pain or distress involved) and thus may experience greater distress during torture and develop posttraumatic stress symptoms. In addition, certain forms of torture that involve greater loss of control and unpredictability (e.g., asphyxiation, restriction of body movements during torture, sham executions, helplessness in the face of extreme humiliation) are associated with greater perceived distress. This observation is consistent with evidence from animal work showing that uncontrollable and unpredictable stressors play an important role in the development of anxiety and fear responses (Basoglu & Mineka, 1992). These findings not only shed some light on the mechanisms of traumatization in torture survivors, but may also have implications for effective treatment. If loss of control is a critical factor in developing traumatic stress symptoms, then effective treatment would need to involve strategies that focus on helping the torture survivor regain a sense of control. Future research on this issue should include controlled clinical trials to test the efficacy of treatments with a focus on sense of control.

Impunity for Perpetrators and Posttraumatic Stress Responses

A commonly held view among mental health professionals working with survivors of human rights abuses is that impunity for perpetrators contributes to social and psychological problems and impedes healing processes in survivors (Carmichael & McKay, 1996; Flores, 1991; Gordon, 1994; Lagos, 1994; Lagos & Kordon, 1996; Neumann & Monasterio, 1991; Nicoletti, 1991; Roht-Arriaza, 1995). Impunity for torturers is said to lead to an erosion of moral codes; an implied acceptance of violent behavior in the community; feelings of fear, helplessness, and insecurity in society; and "social alienation" manifested by feelings of failure and skepticism, frustration, and addictive and violent behavior (Lagos, 1994). It has also been suggested that impunity impedes the bereavement process; induces self-blame and guilt; enhances reexperiencing of trauma; generates feelings of helplessness, isolation, or resentment toward the social environment; and generates survivor's guilt and other traumatic stress reactions such as nightmares, insomnia, depression, and somatization (Lagos, 1994).

This view is supported by cognitive theories of trauma, which maintain that PTSD is mediated by violation of previously held assumptions of invulnerability and personal safety (Foa, Steketee, & Rothbaum, 1989; Janoff-Bulman, 1992), inability to find an acceptable explanation for the trauma (Lifton & Olson, 1976), and violation of beliefs that the world is a just and orderly place (Lerner & Miller, 1978). There is also some evidence from a study of torture survivors (Basoglu et al., 1996) to suggest that lack of belief in a "just" or "benevolent" state may serve as a protective factor against posttorture stress responses. No systematic studies have been conducted, however, to examine how survivors of torture appraise the sociopolitical process of impunity for perpetrators and how such cognitive processes relate to posttraumatic stress responses. Similarly, little is known about how sociopolitical action that aims to bring perpetrators to justice and provide compensation or redress for the atrocities that were committed affects the healing processes in torture survivors.

Some preliminary evidence from a pilot study of 61 torture survivors in Turkey (Basoglu et al., n.d.) indicates that appraisal of sociopolitical processes and associated emotions, particularly a sense of injustice arising from the impunity enjoyed by torturers, are related to posttraumatic stress responses and depression. This study has identified three distinct groups of torture survivors in terms of their cognitive and emotional response to impunity for torturers: (a) those who respond with anger or distress and feelings of vengeance; (b) those who respond with anger or distress but no feelings of vengeance; and (c) those who respond with demoralization, despair, and depression. Emotional response characterized by desire for vengeance (Group 1) was associated with lower socioeducational status and "less psychological preparedness for trauma." The survivors in Group 2 and Group 3 were highly psychologically prepared political activists and, compared with the survivors in Group

1, had more education; fewer feelings of vengeance; less endorsement of "an-eye-for-an-eye, a-tooth-for-a-tooth" type of punishment for torturers; a more structured and sophisticated cognitive schema in relation to sociopolitical processes; stronger political beliefs; and a greater ability to give meaning to the torture experience. Group 3 differed from Group 2 in having less faith and trust in others and more traumatic stress responses. Multiple regression analysis identified loss of trust and faith in others as the possible mediating variable related to traumatic stress responses.

These results suggest that cognitive and emotional responses to sociopolitical processes are quite varied in torture survivors, and generalizations may not be justified. Future research on this issue needs to explore such responses in other cultures and sociopolitical environments, individual factors related to these responses, and how appraisal of sociopolitical events relates to posttraumatic stress reactions. Also important as a research objective, particularly for countries such as South Africa where a "truth and reconciliation" process took place, is to investigate whether and how compensation and redress (monetary or otherwise) for survivors of human rights abuses affect the psychological functioning of survivors. Such research may shed light on which forms of compensation and redress are most helpful in the process of recovery from trauma, both individually and collectively.

The role of sociopolitical factors in determining response to psychological treatment programs for survivors should also be a focus of future research. We do not yet know whether cognitive processes relating to impunity for torturers impede psychological treatment efforts. Indeed, relatively little is known about the role of cognitive factors in the treatment of PTSD (Keane et al., 1992). A recent controlled cognitive–behavioral treatment trial of PTSD (Livanou, 1998; Marks et al., 1998) in a mixed group of trauma survivors showed that (a) pretreatment beliefs about the trauma, self, and the world did not relate to treatment outcome; (b) improvement in PTSD symptoms preceded change in beliefs; and (c) behavioral treatment not involving cognitive interventions achieved as much improvement in PTSD as did cognitive therapy. These findings suggest that the role of certain cognitive factors in the treatment of PTSD may be more or less relevant to different groups of survivors or different types of trauma. It should also be remembered that many torture survivors never develop psychological problems, and many recover from the effects of trauma, either spontaneously or with treatment (Basoglu & Aker, 1996), despite a culture of complete impunity for torturers in their country. In conclusion, generalizations on this issue may be counterproductive, as an exclusive focus on sociopolitical factors in survivor care may impede the development of effective psychological treatments for survivors.

Research into Mental Health Effects of Torture and Refugee Trauma: An Alternative Approach

Most research on the mental health effects of torture and refugee trauma is based on a priori definitions of survivor populations (e.g., torture survivors, internally displaced people, asylum-seekers, refugees) and the assumption that the mental health problems observed in study subjects are caused by the trauma that defined the study group in the first place. Such a priori distinctions between trauma survivors may be helpful in political or advocacy work or in humanitarian and relief activities but may not have much value in formulating a conceptual model that would be useful in understanding the mental health effects of various stressors and possible ways of treating them.

A potentially useful research model developed by the authors would take multiple factors into account, including (a) the varied and overlapping nature of the traumatic stressors experienced by survivors of political violence, torture, and refugee trauma; (b) situational variables during the traumatic event, such as perceived severity of trauma, unpredictability and uncontrollability of stressors, and coping strategies; (c) the interactions between torture trauma, subsequent traumatic events in a politically repressive environment, and other stressful life events; (d) the differential relationships between stressors and psychological symptoms; and (e) the possible associations between sociopolitical and cultural factors, cognitive processes, and psychological symptoms.

This model would require careful operationalization and measurement of traumatic stressors, situational variables, cognitive factors (e.g., appraisal of sociopolitical events, culturally related beliefs about the trauma, and beliefs about self and the world), and traumatic stress symptoms to test hypotheses concerning mechanisms of traumatization. It would also use carefully matched controls. Hypothesis testing concerning the stressor–response relationship would be based on both between- and within-group analyses. This model would enable "mapping" of traumatic stress symptoms onto related stressors while controlling for other variables that may confound the stressor–response relationship. Multivariate statistical techniques, multiple regression analyses, or path analysis would be used to elucidate the complex relationships between demographic variables, personality characteristics, personal history variables, traumatic stressors, situational variables during the traumatic event, posttrauma psychosocial stressor social support, and psychological symptoms. This model would also use longitudinal research designs to examine the relationships between these variables.

Regarding refugee populations, future research based on this model needs to explore the possibly differential mental health effects of torture and refugee trauma and to examine how various traumatic stressors associated with these events interact in producing the symptoms commonly observed in tortured refugees. Of particular interest is whether the psychological effect of these stressors is additive or interactive. These issues could be best examined by controlled studies using a 2 x 2 design that would allow comparisons between tortured refugees, nontortured refugees, nonrefugee torture survivors, and nonrefugee controls with no torture experience.

Implications for Survivor Care Policies

The research evidence reviewed here may have important implications for legal, public health, and medical care policies concerning torture survivors. Some of these implications are briefly reviewed below.

Immigration and asylum policies and procedures should be informed by the knowledge that a substantial proportion of refugees seeking asylum may have had at least one experience of torture and that torture may lead to disabling psychological problems that may last decades or even a lifetime.

The traumatic effect of torture has been shown to be mediated by the subjective appraisal of its severity and perhaps less so by its nature, frequency, or duration (Basoglu & Paker, 1995). The definition and severity of torture are often important issues in legal cases involving asylum applications and compensation claims. Decisions are often influenced by the assumption that there is a relationship between the severity of the trauma and the ensuing psychological disability. Asylum applicants, for example, can make a stronger case if they can evidence the severity of their torture. Such an assumption can lead to problems in decisions concerning two groups of survivors: those who have experienced severe torture with minimal or no psychological problems and those who have developed severe traumatic stress as a result of less severe trauma. The former group of torture survivors may have difficulty evidencing past torture, while the latter may not be able to provide a convincing account for the severity of their psychological disability. Thus, the experiences of both of these groups may be misunderstood for different reasons. Subjective appraisal of the torture experience should, therefore, be given due consideration to avoid errors in assessing such cases.

Policies about refugee care benefit from information about the mental health effects of torture and refugee trauma. Attention to mental health issues may be as important as providing legal, social, and economic aid for refugees. As noted earlier, social support may not be sufficient for the recovery process unless it is complemented with effective psychological treatment. Furthermore, the therapeutic value of social support may be limited unless the person is psychologically able to process it. Greater consideration must be given to the need for mental health services for tortured refugees; mental health professionals need to play a more central role in the policymaking aspects of refugee care.

Given the estimates of the prevalence of torture in the world and the mental health hazard posed by its potential for chronic and disabling psychological consequences, psychological treatments with demonstrated efficacy are urgently needed. In view of the realities of mental health care delivery in troubled parts of the world where help is most needed, treatments are likely to be most appropriate if they are brief and cost-effective and if they integrate a variety of self-help and traditional healing models. Survivor care policies need to place greater emphasis on developing such treatments through systematic research and on training mental health workers in effective treatment techniques.

Considering the relationship between fear or avoidance of trauma reminders and social disability in torture survivors, treatment interventions with a demonstrated potential for reducing avoidance behavior may deserve increased attention in rehabilitating survivors. Exposure treatment as part of a behavioral program appears to be a promising approach in this regard (see chapter 16 in this volume). Indeed, 12 controlled studies (Boudewyns & Hyer, 1990, 1996; Brom, Kleber, & Defares, 1989; Cooper & Clum, 1989; Foa, Rothbaum, Riggs, & Murdock, 1991;

Keane, Fairbank, Caddell, & Zimering, 1989; Marks et al., 1998; Peniston, 1986; Resick, Jordan, Gierelli, Hutter, & Marhoefer-Dvorak, 1988; Resick & Schnicke, 1992; Tarrier et al., 1998; Vaughan et al., 1994) have demonstrated the efficacy of exposure-based treatments in PTSD related to a wide range of traumas. Some preliminary evidence indicates that such treatments are also effective in reducing fear and avoidance of trauma reminders and enhancing sense of control, thereby minimizing social disability in traumatized survivors of torture (Basoglu, 1992b, 1998; Basoglu & Aker, 1996). Although such treatments are promising, care should be taken both in the training and delivery of such treatments.

Finally, relatively little scientific interest has been expressed in the study of torture, its psychological effects, and their treatment, despite the prevalence of torture and the mental health hazard posed by the experience. Many of the available resources for survivor care are often used for social, legal, and economic aid and for various rehabilitation programs, the efficacy of which has not yet been demonstrated. Scientific research with due regard for ethical issues is possible and essential for effective survivor care and is important information for developing policies (Basoglu, 1993; Basoglu & Marks, 1988). Such scientific inquiry regarding torture survivors has important implications for human rights, theory, assessment, classification, treatment of traumatic stress responses, and legal issues concerning torture survivors. The effects of torture on the individual have interacting social, political, cultural, economic, medical, psychological, and biological dimensions. An integrated approach (Basoglu, 1993; Mollica, 1992) with due emphasis on all dimensions is needed for more effective preventive measures against torture and for more effective care of survivors.

Future Research Recommendations

In this discussion, we have highlighted some of the important current research issues and the directions for future research. To summarize, future research needs to focus on various important issues that include biological and neurological mechanisms of traumatization, factors related to long-term psychological functioning, and effective treatments for survivors of torture. Given the preliminary evidence on the importance of protective factors in trauma, further research is needed to elucidate the behavioral and cognitive components of such concepts. Such evidence also suggests that future research should focus on such protective factors, including resilience. A better understanding of resilience factors could be helpful in developing more effective treatment programs for torture survivors.

We also need a better understanding of how various stressors such as torture, uprooting, refugee trauma, and loss of social support relate to PTSD symptoms, anxiety, depression, and other psychological problems in survivors of torture. Controlled comparison studies involving refugee and nonrefugee torture survivors are needed to address this issue. Such studies may be best facilitated by multisite collaborative efforts. Collaborative studies may also help develop standardized and validated assessment instruments for refugee and nonrefugee torture survivors.

Systematic research is needed to understand how impunity for perpetrators and compensation or redress for the acts committed affect the psychological functioning of survivors of political violence and torture. Such research would be useful in clarifying the psychological effects of "truth and reconciliation" processes, such as in South Africa, on survivors as well as on the community. This research could also provide valuable insights into how such processes should be conducted to avoid further traumatization and promote the psychological well-being of survivors and their communities. The lessons learned could be useful for other countries where similar attempts are being considered.

Additional emphasis is needed on research in developing effective treatments for torture survivors. Controlled treatment trials with adequate follow-up are urgently needed to identify the most effective treatments and the mechanisms by which they exert their therapeutic effect. Pharmacological agents and psychological treatments with demonstrated efficacy in treating PTSD in survivors of other types of trauma need to be subjected to controlled trials to test their efficacy in both refugee and nonrefugee torture survivors. Of particular interest would be the study of combined drug–psychotherapy interventions in reducing traumatic stress reactions.

Outcome evaluation in rehabilitation work with torture survivors should also receive greater emphasis. Given the scarce resources available for the care of torture survivors, the efficacy of current rehabilitation models needs to be evaluated, and their therapeutic ingredients need to be clarified.

Within western countries that serve as resettlement countries, research priorities can focus on the prevalence of past torture experience among refugee populations, the prevalence and nature of medical and psychosocial problems among torture survivors, and the recovery process. Such studies could also be undertaken in countries of origin where the political circumstances are relatively favorable for this type of research.

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